

BIRCH, STEWART, KOLASCH & BIRCH, LLP

INTELLECTUAL PROPERTY LAW  
8110 GATEHOUSE ROAD  
SUITE 500 EAST  
FALLS CHURCH, VA 22042-1210  
USA

(703) 205-8000

FAX: (703) 205-8050  
(703) 698-8590 (G IV)

e-mail: mailroom@bskb.com  
web: http://www.bskb.com

CALIFORNIA OFFICE  
COSTA MESA, CALIFORNIA

THOMAS S. AUCHTERLONIE  
JAMES T. ELLER, JR.  
SCOTT L. LOWE  
MARK J. NUEL, PH.D.  
D. RICHARD ANDERSON  
PAUL C. LEWIS  
MARK W. MILSTEAD\*  
JOHN CAMPA\*  
RICHARD J. GALLAGHER

REG. PATENT AGENTS  
FREDERICK R. HANDREY  
MARYANNE ARMSTRONG  
MAKI HATSUMI  
MIKE S. RYU  
CRAIG A. McROBBIE  
GARTH M. DAHLEN, PH.D.  
LAURA C. LUTZ  
ROBERT E. GOOZNER, PH.D.  
HYUNG N. SOHN  
MATTHEW J. LATTIG  
ALAN PEDERSEN-GILES  
JUSTIN D. KARJALA  
C. KEITH MONTGOMERY  
TIMOTHY R. WYCKOFF  
HERMES M. SOYEZ, PH.D.  
KRISTI L. RUPERT, PH.D.

RELL C. BIRCH  
BOND C. STEWART  
A. KOLASCH  
M. SLATTERY  
D. L. SWEENEY\*  
MICHAEL K. MUTTER  
CHARLES GORENSTEIN  
GERALD M. MURPHY, JR.  
LEONARD R. SVENSSON  
TERRY L. CLARK  
ANDREW D. MEIKLE  
MARC S. WEINER  
JOE McKINNEY MUNCY  
ROBERT J. KENNEY  
DONALD J. DALEY  
JOHN W. BAILEY  
JOHN A. CASTELLANO, III  
GARY D. YACURA

OF COUNSEL:  
HERBERT M. BIRCH (1905-1996)  
ELLIOT A. GOLDBERG\*  
WILLIAM L. GATES\*  
EDWARD H. VALANCE  
RUPERT J. BRADY (RET.)\*  
F. PRINCE BUTLER  
FRED S. WHISENHUNT

\*ADMITTED TO A BAR OTHER THAN VA.

Date: September 12, 2000

Docket No.: 0879-0274P

Assistant Commissioner for Patents  
Box PATENT APPLICATION  
Washington, D.C. 20231

Sir:

As authorized by the inventor(s), transmitted herewith for filing  
is a patent application applied for on behalf of the inventor(s)  
according to the provisions of 37 CFR 1.41(c).

Inventor(s): SATO, Tsuneo

For: IMAGE TRANSMITTER

Enclosed are:

- X A specification consisting of 15 pages
- X 6 sheet(s) of formal drawings
- Certified copy of Priority Document(s)
- X Executed Declaration in accordance with 37 CFR 1.64 will follow
- A verified statement to establish small entity status under 37  
CFR 1.9 and 37 CFR 1.27
- Preliminary Amendment
- X Information Sheet
- Information Disclosure Statement, PTO-1449 with reference(s)

Other \_\_\_\_\_

The filing fee has been calculated as shown below:

## LARGE ENTITY

## SMALL ENTITY

FOR	NO. FILED	NO. EXTRA	RATE	FEE		RATE	FEE
BASIC FEE	***** ***** *****	***** ***** *****	***** ***** *****	\$690.00	or	**** **** ****	\$345.00
TOTAL CLAIMS	6 - 20 =	0	x18 =\$	0.00	or	x 9 = \$	0.00
INDEPENDENT	1 - 3 =	0	x78 =\$	0.00	or	x 39 = \$	0.00
MULTIPLE DEPENDENT CLAIM PRESENTED <u>no</u>			+260 = \$	0.00	or	+130 = \$	0.00
				TOTAL \$	690.00	TOTAL \$	0.00

X The application transmitted herewith is filed in accordance with 37 CFR 1.41(c). The undersigned has been authorized by the inventor(s) to file the present application. The original duly executed patent application together with the surcharge will be forwarded in due course.

X A check in the amount of \$ 690.00 to cover the filing fee and recording fee (if applicable) is enclosed.

\_\_\_\_\_ The Government Filing Fee will be paid at the time of completion of the filing requirement.

\_\_\_\_\_ Please charge Deposit Account No. 02-2448 in the amount of \$\_\_\_\_\_. A triplicate copy of this transmittal form is enclosed.

X Send Correspondence to: BIRCH, STEWART, KOLASCH & BIRCH, LLP  
P. O. Box 747  
Falls Church, Virginia 22040-0747

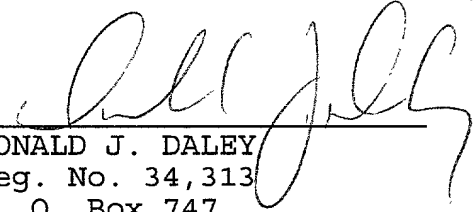
— No fee is enclosed.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. 1.16 or under 37 C.F.R. 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By

  
DONALD J. DALEY

Reg. No. 34,313

P. O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

DJD/amr

# IMAGE TRANSMITTER

## BACKGROUND OF THE INVENTION

### Field of the Invention

The present invention relates generally to an image transmitter, and more particularly to a portable image transmitter powered by a battery.

### Description of Related Art

There is a conventional image transmission system, wherein: image data acquired by a digital camera or the like is captured into a portable microcomputer (e.g., a laptop, a notebook, and a palmtop) with an image transmitting function; the image data is transmitted from the portable microcomputer through the public telephone network with a portable telephone such as a cellular phone; and a receiving computer or a server receives the transmitted image data through the public telephone network via a modem or an adapter.

Since the image data includes a large amount of data, it takes a long time to transfer the image data with several million pixels if a plurality of pieces of image data are transmitted from the portable microcomputer by using the portable phone and the like. Therefore, when the image data is transmitted from the portable microcomputer by using the portable phone and the like while being powered by a battery, there is a problem that the transmission of the image data is interrupted if the battery goes dead during the transmission of the image data. In particular, if image data of a plurality of images is transmitted at the same time, there is a high probability that the transmission of the image data may be interrupted.

## SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide an image transmitter that prevents the transmission of image data from being interrupted while being powered by a battery.

5       The above object can be accomplished by providing an image transmitter which transmits image data, the image transmitter comprising: an image selecting device which selects at least one image to be transmitted; a data amount determining device which determines an amount of data in the selected image; a battery residual quantity determining device which determines a residual quantity of a battery powering the image transmitter; a transmittability determining device which determines whether or not it is possible to transmit all of image data of the selected image according to the amount of data in the selected image and the residual quantity of the battery; and a control device which transmits the image data if the transmittability determination device determines that it is possible to transmit all of the image data, and which prohibits the image data from being transmitted if the transmittability determination device determines that it is impossible to transmit all of the image data.

20       More specifically, if it is determined that it is impossible to transmit all of the image data according to the amount of the image data to be transmitted and the residual quantity of the battery, the transmission of the image data is prohibited from starting. This eliminates the disadvantage that the transmission of the image data is interrupted since the battery goes dead during the transmission.

25       Preferably, the image transmitter further comprises: a display device which displays a message indicating that it is impossible to transmit all of the image data if the control device prohibits the image data from being transmitted.

Preferably, the image data comprises an identification code; and the image selecting device selects the image to be transmitted according to input of the identification code. Preferably, the identification code comprises at least one of the following: a manufacture identification code representing a manufacturer of an image input device capturing the image, a date identification code representing one of a photographing date and an image file creation date of the image, and a model identification code representing a model of the image input device. These identification codes make it easier to select the related images.

Preferably, when a plurality of images are selected to be transmitted, if it is determined that it is impossible to transmit all of the image data, the control device transmits only transmittable image data per image and prohibits the rest of image data from being transmitted. Therefore, if the plurality of images to be transmitted is selected and not all of the images can be transmitted, it is possible to transmit only transmittable image one by one.

Preferably, the image data comprises main image data and thumbnail image data; if the determination device determines that it is impossible to transmit all of the main image data, the determination device further determines whether it is possible to transmit all of the thumbnail image data; and if the determination device determines that it is impossible to transmit all of the main image data and that it is possible to transmit all of the thumbnail image data, the control device transmits the thumbnail image data instead of the main image data. More specifically, if it is impossible to transmit the main image data but it is possible to transmit the thumbnail image data with the smaller data amount than the main image data, the thumbnail image data is only transmitted.

## BRIEF DESCRIPTION OF THE DRAWINGS

The nature of this invention, as well as other objects and advantages thereof, will be explained in the following with reference to the accompanying drawings, in which like reference characters designate the same or similar parts throughout the figures and wherein:

Fig. 1 is a conceptual drawing showing a system in which an image transmitter according to the present invention is used;

Fig. 2 is a view showing an example of formats of images recorded by an image input device;

Fig. 3 is an inside block diagram showing an embodiment of the image transmitter in Fig. 1;

Fig. 4 is a flow chart showing a procedure of transmitting images by the image transmitter in Fig. 1;

Fig. 5 is a flow chart showing another embodiment of selection of images to be transmitted;

Fig. 6 is a flow chart showing another embodiment of determination about whether or not it is possible to transmit images; and

Fig. 7 is a flow chart showing yet another embodiment of determination about whether or not it is possible to transmit images.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Preferred embodiments of an image transmitter according to the present invention will be described hereinbelow with reference to the accompanying drawings.

Fig. 1 is a conceptual drawing of a system in which an image transmitter of the present invention is used.

In Fig. 1, a memory card 2 containing image data is attachable to the image transmitter 1. From the memory card 2, the image transmitter 1 captures image data to be transmitted.

The image data in a predetermined image format is recorded in the memory card 2 by an image input device such as a digital camera (not shown). As shown in Fig. 2, an image file comprises a file header, annexed information, thumbnail image data and main image data. The annexed information includes a variety of information such as the name of the manufacturer of the image input device, the name of the model of the image input device, the file creation date and the amount of data.

Upon image data to be transmitted is selected from the memory card 2 and an instruction to transmit the image data is given, the image transmitter 1 transmits the image data to a personal computer/server 6 via an interface 3 such as a digital wire telephone system (e.g., Integrated Services Digital Network (ISDN)), an analog wire telephone system, a digital mobile telephone system, a public telephone network 4, and a modem/adaptor 5.

Fig. 3 is an inside block diagram of the image transmitter 1 according to a preferred embodiment.

In Fig. 3, the image transmitter 1 includes a small portable microcomputer (e.g., a laptop, a notebook, and a palmtop). The image transmitter 1 comprises an image control part 11; a liquid crystal display (LCD) part 12; a key input part 13; a clock control part 14, a battery power supply 15 including a primary (disposable) battery or a secondary (rechargeable) battery; a telephone line control part 16; a memory card control part 17; and a RAM/EEPROM 18.

The image control part 11 controls the clock control part 14 to oscillate a clock upon the interception of the key input part 13 and a power switch 19, and turns on the LCD part 12. Upon receipt of an instruction from the key input

part 13 to transfer the image data, the image control part 11 turns on power supplies of the memory card control part 17 and the RAM/EEPROM 18 by switches SW2 and SW3, and changes the clock to a high-frequency. Then, the image control part 11 reads the image data stored in the memory card 2 through the memory card control part 17, and determines whether the memory card 2 contains any image data to be transmitted. If the image control part 11 determines that there is some image data to be transmitted in the memory card 2, the image control part 11 turns on a power supply of the telephone line control part 16 by a switch SW 1 and then transmits the image data.

Upon completion of the image data transmission, the image control part 11 displays a message indicating the completion of the image transmission on the LCD part 12. Then, the image control part 11 turns off the power supplies of the telephone line control part 16, the memory card control part 17 and the RAM/EEPROM 18 by the switches SW1, SW2 and SW3, and changes the clock to a low frequency to thereby reduce the power consumption. Thereafter, the image control part 11 counts for a predetermined period of time to determine whether there is any new key input from the key input part 13. If there is no key input in the predetermined period of time, the image control part 11 turns off the display of the LCD part 12 and stops the oscillation of the clock to thereby reduce the power consumption to approximately zero.

There will now be described a procedure for controlling the transmission of the image data by the image control part 11. As described hereinbelow, the image control part 11 controls the transmission in such a manner as not to interrupt the transmission of the image data in a case where the image transmitter 1 is powered by the battery.

As shown in the flow chart of Fig. 4, the image control part 11 determines whether there is any key input after the power switch 19 is turned on (step S10). If there is no key input, the image control part 11 counts for a

predetermined period of time (step S12). In the case where there is no key input during the predetermined period of time passes, the image control part 11 turns off the power supplies of the LCD part 12 and the like as described previously (step S14).

5 If there is a key input at the step S10, the image control part 11 determines whether the key input is an instruction to transmit the image data or not (step S16). If the key input is not the instruction to transmit the image data, the process jumps to the step S12. If the key input is the instruction to transmit the image data, the process goes to a step S18.

10 In the step S18, the image control part 11 turns on the power supplies of the telephone line control part 16, the memory card control part 17 and the RAM/EEPROM 18 by the switches SW1-SW3 as stated previously. Then, the image control part 11 reads the image data stored in the memory card 2, and displays a multi-image composed of multiple images read from the memory card 2 on the LCD part 12 to select one or more images to be transmitted in an  
15 onscreen interactive mode (step S20).

Then, the image control part 11 checks the battery to determine the residual quantity of the battery (i.e., the electric energy drawable from the battery) (step S22). According to the residual quantity determined in the step  
20 S22, the image control part 11 determines whether it is possible or not to transmit all the images selected in the step S20 (step S24) in a manner described below. The image control part 11 reads, from the annexed information of the image file, the amount of data about the image to be transmitted. If there is a plurality of images to be transmitted, the image control part 11 finds the total amount of data about the images to be transmitted. Then, the image control part calculates a  
25 transmission period required for transmitting the found amount of data. On the other hand, the image control part 11 finds a transmittable period according to the residual quantity of the battery determined in the step S22. If the

transmittable period found according to the residual quantity of the battery is longer than the transmission period required for the transmission of the total data, the image control part 11 determines that it is possible to transmit all the selected images.

5           If it is determined in the step S24 that it is possible to transmit all the selected images, the image control part 11 transmits the image data about the images selected in the step S20 (step S26). Then, the process jumps to the step S12.

10           On the other hand, if it is determined in the step S24 that it is impossible to transmit all the selected images, the image control part 11 displays a message indicating the impossibility of the image transmission on the LCD part 12 and prohibits the transmission of the image data (step S28). Then, the process jumps to the step S12. This eliminates the disadvantage that the transmission of the image data is interrupted if the battery should go dead during the transmission.

15           Fig. 5 is a flow chart showing another embodiment of the selection of images to be transmitted.

20           After the power supply of each part is turned on (step S18 in Fig. 4), it is determined whether the manufacturer of the image input device such as the digital camera has been selected (step S30), whether the photographing date or the image file creation date has been selected (step S32), and whether the model of the image input device has been selected (step S34).

25           Upon selection of the manufacturer of the image input device, the image control part 11 selects the image file(s) that is recorded by the image input device of the selected manufacturer, according to the manufacturer identification code in the annexed information of the image file(s) (step S36). Upon selection of the date, the image control part 11 selects the image file(s) that is recorded on the selected date, according to the date identification code in the annexed

information of the image file(s) (step S38). Upon selection of the model, the image control part 11 selects the image file(s) that is recorded by the image input device of the selected model, according to the model identification code in the annexed information of the image file(s) (step S40).

5 This enables the efficient selection of the image files. If none of the above selections is performed, all the images recorded in the memory card are selected (step S42).

The information for selecting the desired image or images to be transmitted from the images recorded in the memory card 2 is not restricted to the above embodiment. For example, it is possible to use GPS information in the annexed information to thereby select images that are captured at substantially the same photographing place. It is also possible to select images to be transmitted on condition that two or more pieces of selecting information are satisfied among multiple pieces of selecting information about the manufacturer, the date, the model and the like.

Fig. 6 is a flow chart showing another embodiment of the determination about whether it is possible or not to transmit the images.

After the images to be transmitted are selected (step S20 in Fig. 4), the battery is checked to determine the residual quantity of the battery as shown in Fig. 6 (step S50). According to the residual quantity of the battery determined in the step S50, it is determined whether it is possible or not to transmit image data of one image (step S52).

If it is determined in the step S52 that it is possible to transmit the image data of one image, the image data of one untransmitted image among the selected images is transmitted (step S54). Then, it is determined whether all the selected images have been transmitted or not (step S56). If all the selected images have already been transmitted, the process jumps to the step S12. If all the selected images have not yet been transmitted, the process jumps to the step S50 in order

to check the battery again.

If it is determined in the step S52 that it is impossible to transmit the image data of one image according to a result of the battery checking in the step S50, a message indicating that it is impossible to transmit the image is displayed on the LCD part 12 in order to prohibit the transmission of the image data (step S58). Then, the process jumps to the step S12.

According to the embodiment shown in Fig. 6, the battery is checked for every piece of image data of one image to determine whether it is possible or not to transmit the image data of the one image. This solves the problem that the transmission of the image data of one image is interrupted if the battery should go dead.

In the step S58, the message indicating that it is impossible to transmit the image is displayed, and it is preferable to additionally display the file, etc. of the image that is selected to be transmitted but is prohibited from being transmitted. It is also possible to store the name of the file of the image that is prohibited from being transmitted, in a non-volatile memory such as EEPROM, and automatically transmit the image data of the prohibited image when the battery is replaced with a new one.

Fig. 7 is a flow chart showing yet another embodiment of the determination about whether it is possible or not to transmit the image.

After the residual quantity of the battery is determined (step S22 in Fig. 4), it is determined whether it is possible or not to transmit main image data of all the selected images according to the residual quantity of the battery determined in the step S22 as shown in Fig. 6 (step S60). If it is determined in the step S60 that it is possible to transmit the main image data of all the selected images, the main image data of all the selected images is transmitted (step S62). Then, the process jumps to the step S12.

If it is determined in the step S60 that it is impossible to transmit the

main image data of all the selected images, it is then determined that it is possible or not to transmit thumbnail image data of all the selected images (step S64). If it is determined in the step S64 that it is possible to transmit the thumbnail image data of all the selected images, a message indicating that the thumbnail image data will be transmitted is displayed on the LCD part 12 (step S66). Then, the thumbnail image data of all the selected images is transmitted (step S68), and the process jumps to the step S12.

If it is determined in the step S64 that it is impossible to transmit the thumbnail image data of all the selected images, a message indicating that it is impossible to transmit the images is displayed on the LCD part 12, and the transmission of the image data is prohibited (step S70). Then, the process jumps to the step S12.

More specifically, if it is determined that it is impossible to transmit the main image data as a result of checking the battery, the thumbnail image data with a smaller data amount is transmitted. If it is impossible to transmit even the thumbnail image data, the transmission of the image data is prohibited.

Regardless of the embodiment described with reference to Fig. 7, it is possible to sequentially reduce the data amount of “the main image data and the thumbnail image data”, “the main image data”, “the thumbnail image data” and “the annexed information” in that order for example according to the residual quantity of the battery and then transmit the transmittable data.

According to the present invention as set forth hereinabove, the transmission of the image data is prohibited from starting if it is determined that it is impossible to all of the image data according to the amount of the image data to be transmitted and the battery residual quantity. This eliminates the disadvantage that the transmission of the image data is interrupted because the battery goes dead in the middle of the transmission. Moreover, the images to be transmitted are selected according to the input of the identification code, and this

enables the easy selection of related images.

It should be understood, however, that there is no intention to limit the invention to the specific forms disclosed, but on the contrary, the invention is to cover all modifications, alternate constructions and equivalents falling within the spirit and scope of the invention as expressed in the appended claims.

5

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

WHAT IS CLAIMED IS:

1. An image transmitter which transmits image data, the image transmitter comprising:

an image selecting device which selects at least one image to be transmitted;

a data amount determining device which determines an amount of data in the selected image;

a battery residual quantity determining device which determines a residual quantity of a battery powering the image transmitter;

a transmittability determining device which determines whether or not it is possible to transmit all of image data of the selected image according to the amount of data in the selected image and the residual quantity of the battery; and

a control device which transmits the image data if the transmittability determination device determines that it is possible to transmit all of the image data, and which prohibits the image data from being transmitted if the transmittability determination device determines that it is impossible to transmit all of the image data.

2. The image transmitter according to claim 1, further comprising a display device which displays a message indicating that it is impossible to transmit all of the image data if the control device prohibits the image data from being transmitted.

3. The image transmitter according to claim 1, wherein:

the image data comprises an identification code; and

the image selecting device selects the image to be transmitted according to input of the identification code.

4. The image transmitter according to claim 3, wherein the identification code comprises at least one of the following: a manufacture identification code representing a manufacturer of an image input device capturing the image, a date identification code representing one of a photographing date and an image file creation date of the image, and a model identification code representing a model of the image input device.

5. The image transmitter according to claim 1, wherein when a plurality of images are selected to be transmitted, if it is determined that it is impossible to transmit all of the image data, the control device transmits only transmittable image data per image and prohibits the rest of image data from being transmitted.

6. The image transmitter according to claim 1, wherein:

the image data comprises main image data and thumbnail image data;

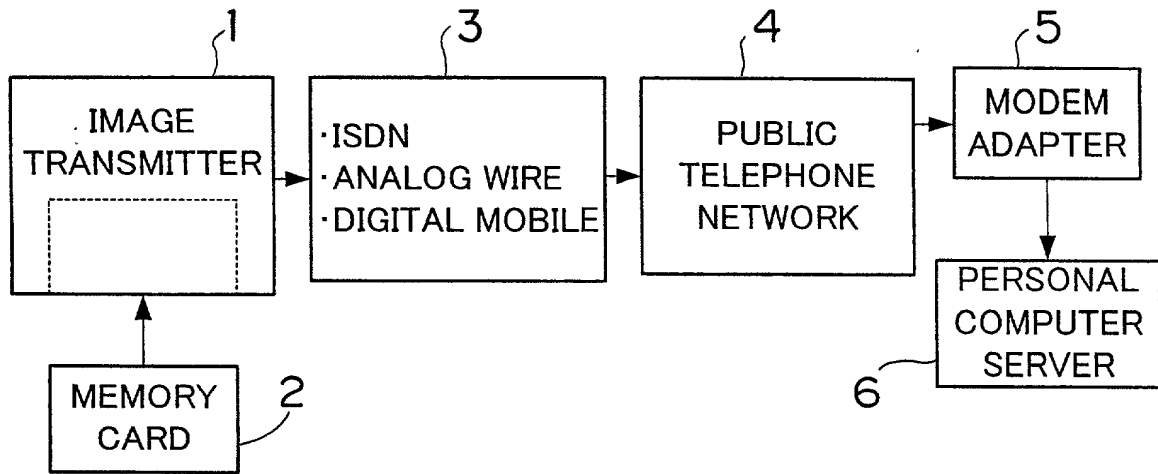
if the determination device determines that it is impossible to transmit all of the main image data, the determination device further determines whether it is possible to transmit all of the thumbnail image data; and

if the determination device determines that it is impossible to transmit all of the main image data and that it is possible to transmit all of the thumbnail image data, the control device transmits the thumbnail image data instead of the main image data.

### ABSTRACT OF THE DISCLOSURE

One or more images to be transmitted are selected, and a battery is checked to determine the residual quantity of the battery. According to the data amount of the selected images and the determined residual quantity of the battery, it is determined whether it is possible or not to transmit all of image data. If it is determined that it is impossible to transmit all of the image data, a message indicating the impossibility of the transmission is displayed and the transmission of the image data is prohibited from starting. This eliminates the disadvantage that the transmission of the image data may be interrupted if the battery should go dead during the transmission.

F I G. 1



F I G. 2

[IMAGE FORMAT]

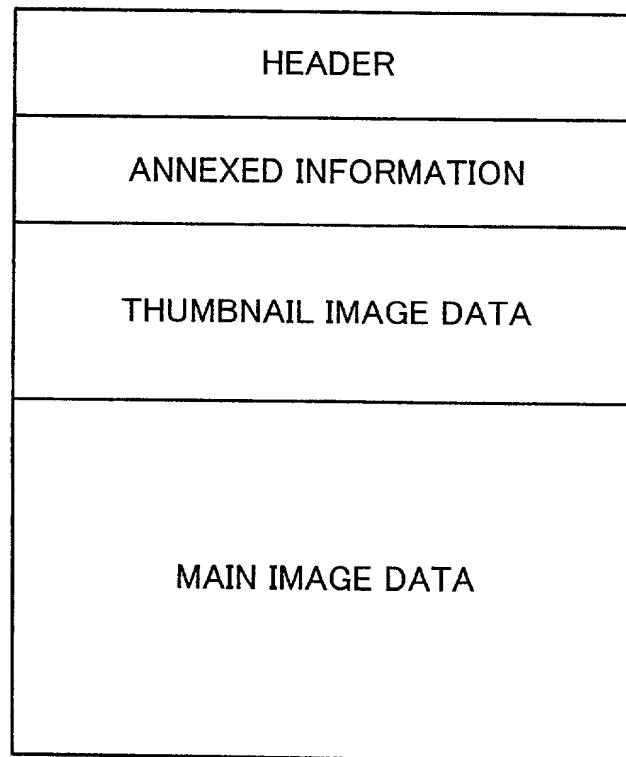


FIG. 3 is a block diagram of a system 100 according to an embodiment of the present invention.

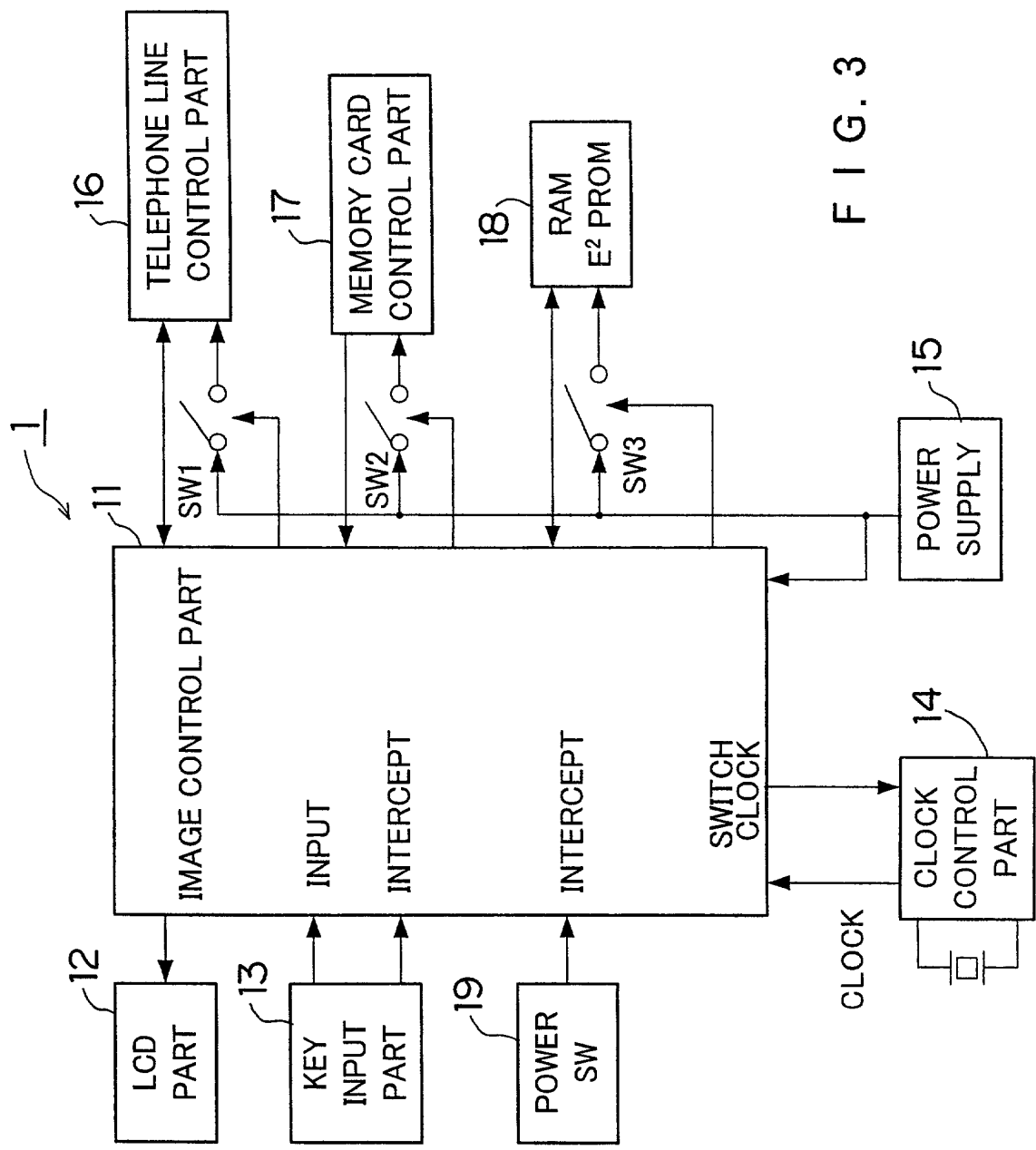


FIG. 3

FIG. 4

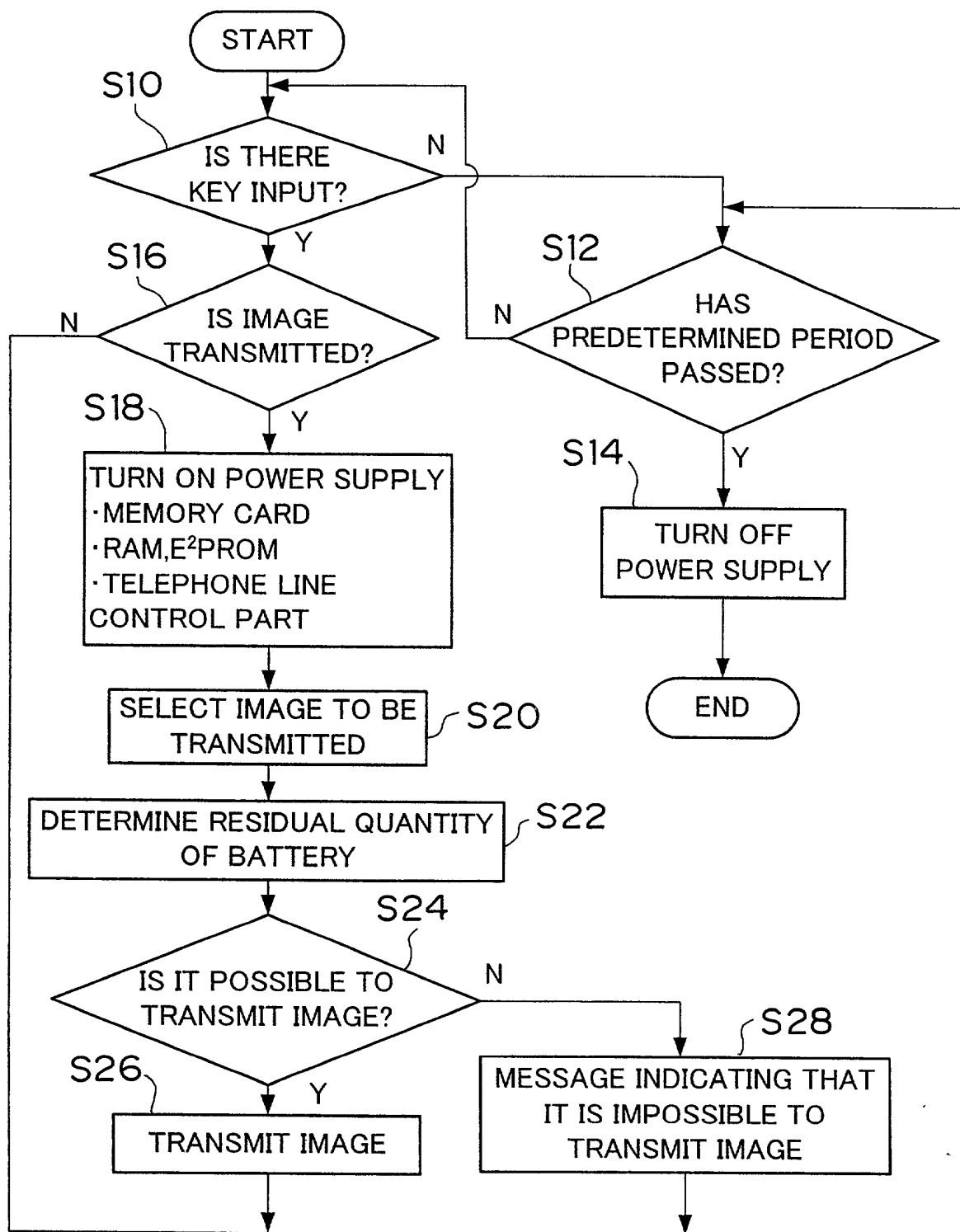


FIG. 5

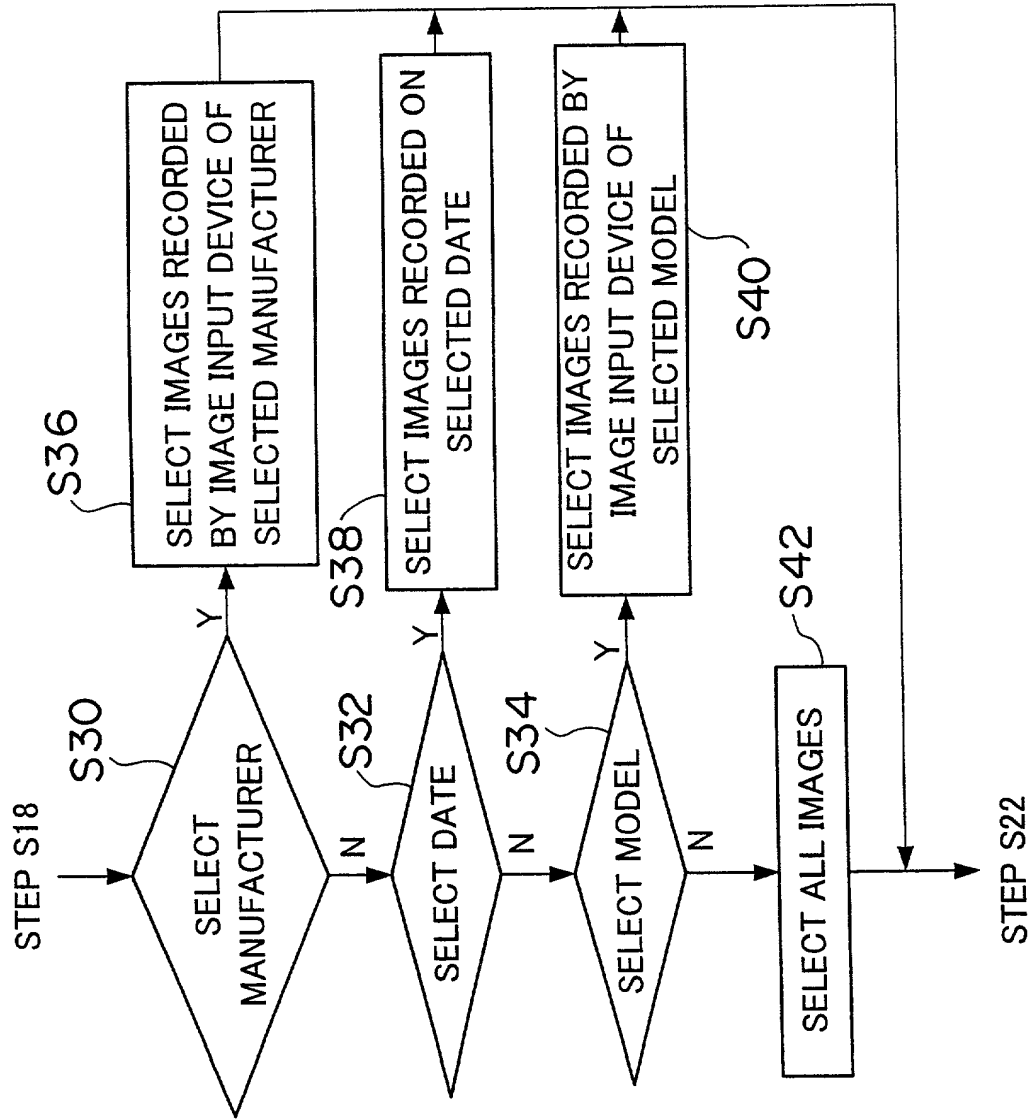


FIG. 6

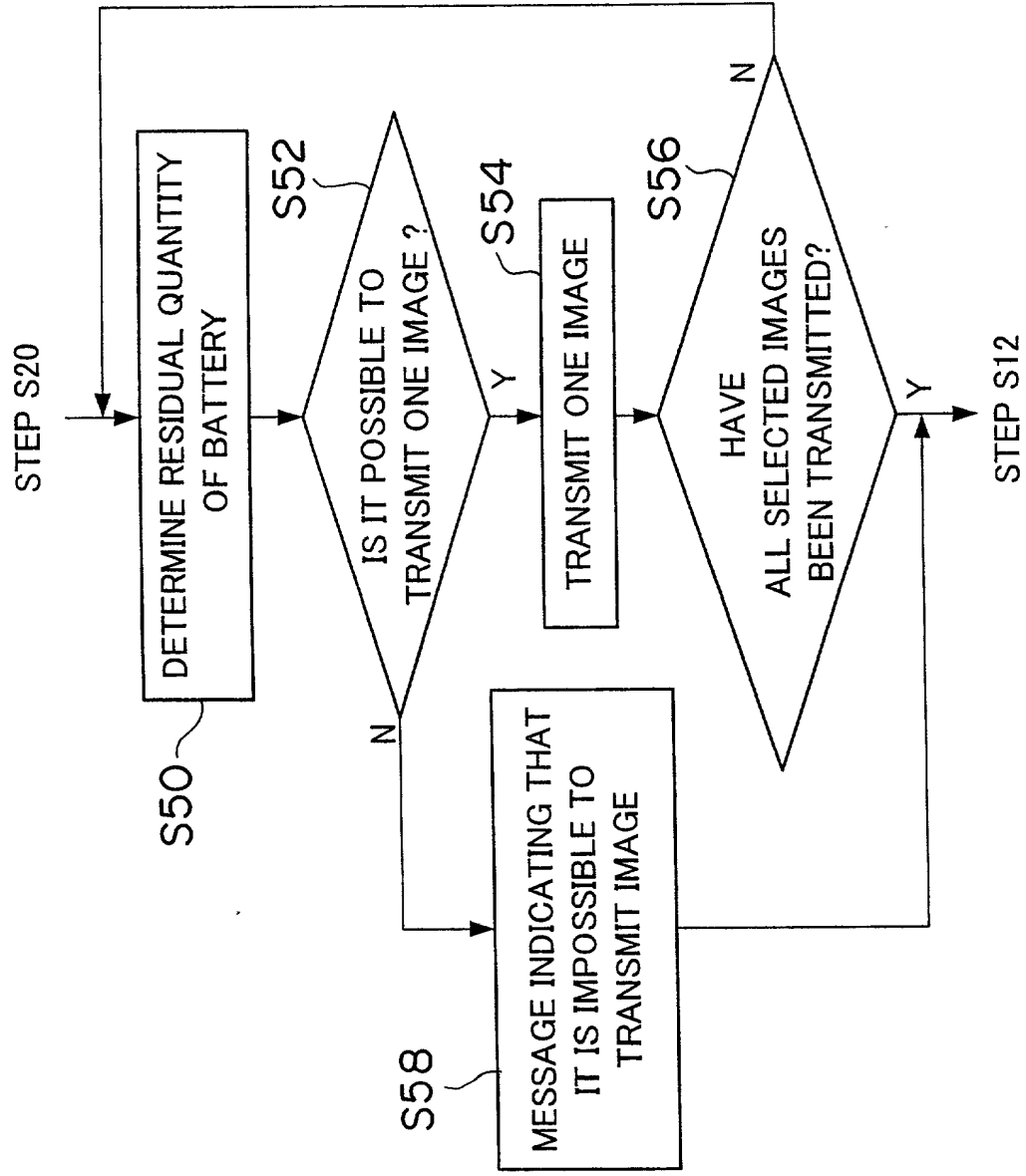


FIG. 7

